EDUCATING FOR INNOVATION: FINDING BALANCE IN THE ARMY'S
PROFESSIONAL MILITARY EDUCATION SYSTEM

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MASTER OF MILITARY ART AND SCIENCE
General Studies

by

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The *Army Operating Concept* describes the challenges of future warfare as volatile, complex, and uncertain. It goes on to state that winning in such an environment "will require innovative, adaptive leaders and cohesive teams who thrive in complex and uncertain environments." In order to meet those challenges, the institutional Army must develop in leaders the appropriate skill sets. However, the professional military education (PME) system that the Army operates under is largely outdated and based on Industrial Age models. The arrival of the Army University signals a commitment to confronting the flaws in the Army's PME, but it does little to address the balance between training and education. This study then fills that gap by closely examining the current state of the Army's education system, the attributes needed in officers to meet today's challenges, education's role in developing those attributes, and the future of the Army's education system. By doing so, it aims to recommend a set of feasible changes that the Army can make to adjust the balance between education and training in the Army's PME. It then analyzes those solutions through the lens of various stakeholders to determine their validity.

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necessarily represent the views of the U.S. Army Command and General Staff College or
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statement.)

ABSTRACT

EDUCATING FOR INNOVATION: FINDING BALANCE IN THE ARMY'S PROFESSIONAL MILITARY EDUCATION SYSTEM, by Major Paul N. de León, 72 pages.

The *Army Operating Concept* describes the challenges of future warfare as volatile, complex, and uncertain. It goes on to state that winning in such an environment "will require innovative, adaptive leaders and cohesive teams who thrive in complex and uncertain environments." In order to meet those challenges, the institutional Army must develop in leaders the appropriate skill sets. However, the professional military education (PME) system that the Army operates under is largely outdated and based on industrial age models. The arrival of the Army University signals a commitment to confronting the flaws in the Army's PME, but it does little to address the balance between training and education. This study then fills that gap by closely examining the current state of the Army's education system, the attributes needed in officers to meet today's challenges, education's role in developing those attributes, and the future of the Army's education system. By doing so, it aims to recommend a set of feasible changes that the Army can make to adjust the balance between education and training in the Army's PME. It then analyzes those solutions through the lens of various stakeholders to determine their validity.

DEDICATION

This work is dedicated to my loving wife, Jessica, and exemplary children, Charlotte and Blake. Without their never-ending support and encouragement this accomplishment would not have been achieved. Thanks for loving me through this journey.

ACKNOWLEDGMENTS

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ACRONYMS

ACC   Army Capstone Concept

ACS   Advanced Civil Schooling

ALDS   *Army Leader Development Strategy*

AOC   Army Operating Concept

ASPG   *Army Strategic Planning Guidance*

AU   Army University

CBA   Capabilities-Based Assessment

DOTML-PF   Doctrine, Organization, Training, Material, Leadership and Education, Personnel, and Facilities

FAS   Feasible, Acceptable, and Suitable

JIIM   Joint, International, Interorganizational, and Multinational

MDMP   Military Decision Making Process

MOOC   Massive Open Online Course

OE   Operating Environment

OER   Officer Evaluation Report

OES   Officer Education System

ORB   Officer Record Brief

PME   Professional Military Education

TRADOC   Training and Doctrine Command

USAWC   United States Army War College

VUCA   Volatile, Uncertain, Complex, and Ambiguous

ILLUSTRATIONS

CHAPTER 1

INTRODUCTION

The nation that will insist on drawing a broad line of demarcation between the
fighting man and the thinking man is liable to find its fighting done by fools and
its thinking done by cowards.[1]
— Sir William Francis Butler, *Charles George Gordon*

Background

The U.S. Army now faces a significant challenge. With the closing of two

warfronts after thirteen years of sustained combat, the Army is refitting amidst budget

and manning cuts. Despite this process, the Army remains engaged in a myriad of

locations across the full range of military operations. Soldiers are currently deployed to

the Middle East to advise and assist the Iraqi government as well as combat ISIS. In West

Africa, the Army recently assisted in providing humanitarian support to combat the

outbreak of the Ebola virus. In Eastern Europe, the Army continues to show its support to

sovereign nations and to deter the growing Russian, hybrid threat.[2] The future of military

operations promises to continue this multifaceted, demanding trend.

The Army's vision of future, armed conflict as volatile, uncertain, complex, and

ambiguous (VUCA) demands that leader development adequately prepares leaders at all

levels to meet future challenges. In the 2015 posture statement, the Chief of Staff and

Secretary of the Army insisted that to overcome those challenges, the Army "must

develop multidimensional, adaptive and innovative leaders who thrive in decentralized,

dynamic and interconnected environments."[3] Adaptive leaders who thrive in uncertainty

do so with critical and creative thinking primarily taught through education. However, the

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Army is still operating under an education system that was built on an Industrial Age model that focuses on a trade-school approach.[4] With the advent of the Army University, the Army is now postured to refocus its education efforts. Therefore, this study aims to analyze the Army's current professional military education (PME) system to determine its relevancy in meeting the demands placed on today's leaders and in preparing them for the challenges they will face.

Education vs. Training

The discussion of balance in the Army's leader development system is as old as the system itself. Debates about training and education in the Army's professional education go back to the eighteenth century with the establishment of the Army's first formal schools. After World War I, World War II, and the Korea War, the Army's professional military education underwent significant review and reformation in response to the lessons learned from each of those engagements and the expectations for future wars. Again, in the post-Vietnam period, the Army's PME was evaluated, this time through the efforts of General William E. DePuy and General Paul F. Gorman. Their reformations, coupled with the advent of Training and Doctrine Command (TRADOC), focused leader development on training over education in an effort to meet the challenges of the Cold War and the demands of an all-volunteer force. These reforms laid the foundation for the current balance between education and training in today's PME.[5]

Today, few would argue against the importance of training in building and maintaining an army. From the pages of Von Steuben's "Blue Book" to the ranges of Sand Hill, training has played an important part in forming disciplined, capable Soldiers. Education, on the other hand, is seen as a luxury. This was especially true of the last

fifteen years when the demands of multiple deployments left little time for education and strained the institutional army as it stretched to fill faculty positions. In the dearth of education, young leaders cultivated their adaptive, innovative skills through the crucible of war.[6] However, without the current opportunities for experiences in war, it is important that the Army continues to develop agility and creativity in its junior leaders through education. In a recent posture statement, Chief of Staff of the Army Gen. Mark A. Milley stated, "Professional Military Education serves as the principal way leaders combine experiences gained during operational assignments with current and emerging doctrinal methods in preparation for combat . . . [providing] the Nation an advantage that neither technology nor weapons can replace."[7] It is clear that the role of education will become increasingly vital in coming years.

<u>Multidimensional, adaptive and innovative leaders</u>

The requirement to have adaptive and innovative leaders has been a recurring theme in doctrine and senior leader's comments since at least 1999 when General Dennis Reimer stated,

> The premium on tomorrow's battlefield will be the ability to quickly analyze a situation and come up with innovative solutions. The speed at which events will occur and their complexity will require leaders with agile minds who can think through a problem logically, come up with viable courses of action, and translate that concept into clear, simple language to his subordinates.[8]

The Army's commitment to developing creative, critical thinkers predates that by almost one hundred years with the establishment of the Army War College and the General Service and Staff College in 1901.[9] However, the emphasis on leader attributes of adaptivity, creativity, and critical-thinking is even more prevalent in today's environments. The Army's Operating Concept, *Win in a Complex World: 2020-2040*,

describes an operating environment that is "unknown . . . unknowable and constantly changing."[10] It goes on to describe the need for leaders who "continuously learn, adapt, and innovate"[11] who can "think critically, are comfortable with ambiguity, accept prudent risk, assess the situation continuously, develop innovative solutions to problems, and remain mentally and physically agile to capitalize on opportunities."[12] Brigadier General David Fastabend and Mr. Robert Simpson put it more bluntly: "Our 'competitors' are living, thinking and adaptive adversaries who mean to destroy us and the society we defend. Our choice is quite clear: 'Adapt or Die'."[13] The necessity to be able to quickly innovate and adapt in today's operating environments is evident.

Adaptivity, agility, and innovation require critical and creative thinking. In a 2009 *Military Review* article, retired army Colonels Charles D. Allen and Stephen J. Gerras argue that creative thinking "is a critical element of strategic thought and is necessary for successful leadership of our military."[14] Successful leaders possess the ability to think not only critically but also creatively in order to find success. More to the point, creativity and innovation are critical elements that every leader should possess to face the challenges that today's operating environments present.

The ambiguous nature of future warfare coupled with decentralized mission command and the demands of the information age shift the responsibilities for the complexities of modern warfare down to a much lower level than ever before experienced. This is not to say that war is more complex now that it has been in the recent past. The challenges in planning the D-day landings or in rebuilding a post-Vietnam army were as complex as those faced today if not more so.[15] However, with the advent of the information age, the renewed focus on decentralized command, and a new

hybrid threat, more of the onus for solving these complex problems has recently been placed in the hands of junior leaders.

Where before, the planning and problem-solving used to address complexities were kept at flag-officer level and their staffs, now much more junior leaders often face tactical decisions that may have far-reaching strategic implications for the battlefield (see figure 1). Thus, it is important that these junior leaders are adequately prepared with the tools necessary for critical and creative thinking to address those challenges. These tools are imparted through education.
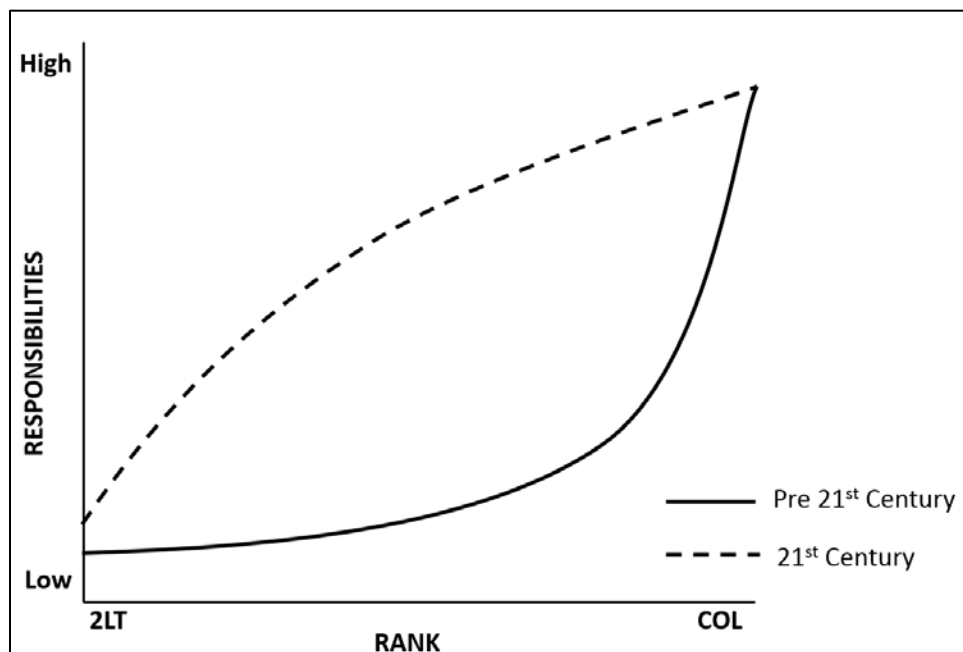
Figure 1.   Responsibilities for addressing the complexities of war

Source: Created by author.

Education provides the necessary foundation to build critical and creative thinking skills that are imperative for successful agility and innovation in the face of ambiguity. In

order to prepare junior leaders for the decentralized, information-heavy environments in which they will operate, the Army must provide them with significant opportunities for development. The *Army Leader Development Strategy* offers a model for leader development based on the pillars of education, training, and experience to develop leaders in three domains: institutional, operational, and self-development (see figure 2). The strategy claims that "to lead in the operational environment, the Army needs a *balance* between education, training, and experience to develop officers who are grounded in Army values, agile, resilient, culturally astute, and able to design, plan, and execute while at peace and war" (emphasis added). However, it does not clarify what, exactly, that balance is.
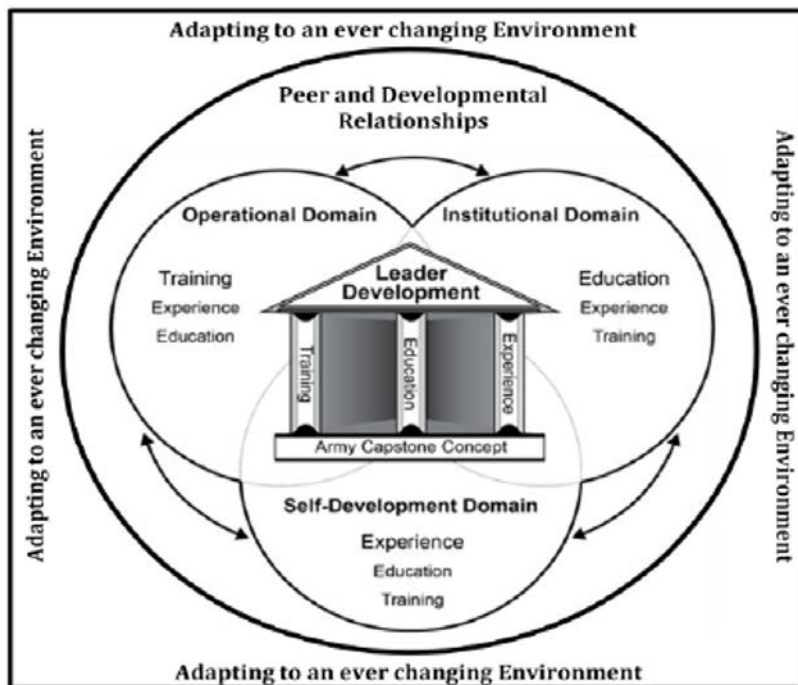
Figure 2.   Army Leader Development Model

Source: U.S. Army, *The Army Leader Development Strategy, 2013* (Washington, DC: Government Printing Office, 2013), 8.

To better understand the distinction between training and education one can turn to Benjamin Bloom's *Taxonomy of Education Objectives: The Classification of Educational Goals*, which provides a framework with which to consider the structure of leader development (see figure 3). Bloom, an educational physiologist, led a committee of college and university leaders to create the framework in 1956 with the intended purpose of producing a classification of educational goals to guide teachers and faculty in curriculum development.
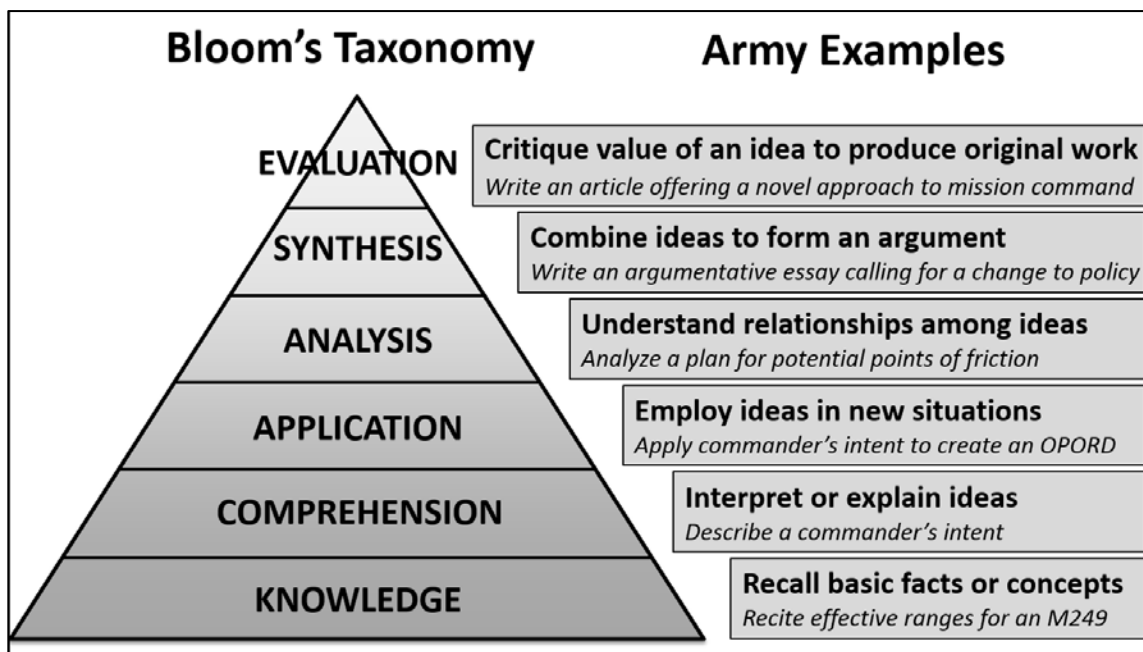
Figure 3.   Bloom's Taxonomy with examples

Source: Created by author using information from Benjamin Bloom, ed., *Taxonomy of Educational Objectives* (White Plains, NY: Longman, 1956).

The *Army Leader Development System* (*ALDS*) defines training as "an organized, structured, continuous, and progressive process based on sound principles of learning

designed to increase the capability of individuals, units, and organizations to perform

specified tasks or skills."[16] Training is about practice and skills. It is concerned with

learning how to do things. Within Bloom's Taxonomy, training occurs in the lower

cognitive domains of "knowledge" and "comprehension." Education, on the other hand,

deals with "imparting knowledge and developing the competencies and attributes Army

professionals need to accomplish any mission the future may present."[17] Education

occupies the higher cognitive domains of "analysis," "synthesis," and "evaluation." Thus,

one's experiences, which tie the lower cognitive domain (training) and higher cognitive

domain (education), are represented in the "application" objective of Bloom's Taxonomy,

which is often experienced in the operational domain.[18]

<div align="center">Recommendations</div>

In order to prepare future leaders at all levels, the Army must shift more attention

to education. Fastabend and Simpson state, "critical thinking is a learned behavior that is

underpinned by education. The Army education system . . . can be our most effective

lever of cultural change."[19] Colonel Robert Tipton makes a similar argument in his

monograph, "Professional Military Education for the "Pentathlete" of the Future." In it,

he argues that officers should train for certainty and educate for uncertainty. He claims

that previous models emphasize training early in an officer's career and does not make

room for education until a leader makes senior rank, but that should not be the case.

Rather, junior officers should educate for uncertainty early in their careers.[20] This study

makes a similar argument, but uses Bloom's taxonomy to better communicate why and

how the shift to education should take place. The complex and challenging problems that

junior leaders face require cognitive proficiency. The types of learning that facilitates that

proficiency take place in the higher cognitive domains of analysis, synthesis, and evaluation, and require education to develop it. Figure four below provides a visual model to represent this shift in balance.
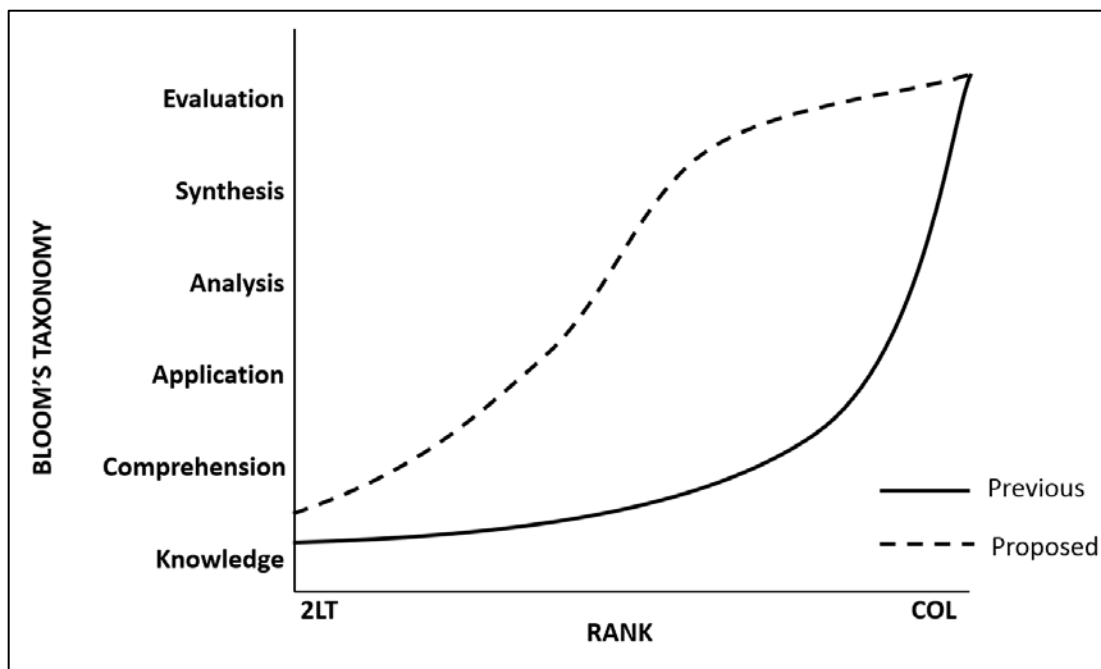
Figure 4.   Educational goals throughout an officer's career

Source: Created by author.

However, the potential downfall of providing such a model is that it seems to imply that at each step in a leader's career, there is a clearly defined balance of education and training. To suggest that a lieutenant or captain should have a specific percentage of education versus training is to fall into dangerously linear and simplistic thinking. The Army's vast array of jobs, career paths, specialties, and schools demand a catered approach to an individual leader's needs. What this model should communicate, however,

is the need for a greater emphasis on education at an early point in a leader's career and the sustained presence of education across the Army's PME.

Nevertheless, the question remains: how does the Army accomplish this shift towards education? In *Leading Change*, John Kotter describes the challenges of cultural change. He argues that, "often the most powerful way to communicate a new direction is through behavior."[21] By this, he means that for a new change to take hold, the institution and its leaders have to demonstrate new values that support the change. To that end, the following are some recommendations to shift the Army's behavior to better value and focus on education.

<div align="center">Greater emphasis on self-study</div>

The Army University White Paper outlines the advent of the Army Press, which will provide a venue for scholars to publish peer-reviewed, quality work. However, it is important that the Army also demonstrate its regard for research and publication through its actions. Adding a block for scholarship (e.g., research, publications, conferences, etc.) on the Officer Evaluation Report (OER) and Officer Record Brief (ORB) would display a clear message of importance to leaders. Furthermore, making written work a requirement to assess Soldiers competing for PME spots would emphasize the importance to continued professional study and writing.

Additionally, the Army University can become the site for additional opportunities for personal development and self-study through available technologies. Civilian universities, such as Stanford University and Harvard University, offer Massive Open Online Courses (MOOCs) to educate a dispersed, self-motivated audience.[22] To promote individual intellectual endeavors and alleviate the burden of on-the-job-training

that tends to plague Army leaders, the Army should emulate civilian MOOCs. This approach can be instantly facilitated by recording many of the current classes offered at established Army schools (such as the CCCs and CGSC) and making them available online.

Tied to the concept of self-study is the role of continued professional reading as a form of self-development throughout a leader's career. To facilitate this, formalized scholarship programs, mentorships, and counseling sessions should be used to emphasize the importance of professional readings. U.S. Army armor officer, Joe Byerly, offers one concept for formalized scholarship programs in his "General Officer Scholar Program." The idea calls for flag-officer-led, voluntary programs of reading, research, and reflection driven by recurring, professional discussions. These discussions could lead to publication and possible recognition for those leaders willing to participate. Thus, through the self-development and operational domains of leader development, leaders could pursue further educational opportunities.[23]

Encourage the study of social sciences and arts

The *ALDS* claims, "we are taking a hard look at pre-commissioning sources to ensure that leaders of tomorrow come into the force with the right set of skills, to include reemphasizing the need for those with backgrounds in science, technology, engineering, and math [STEM]."[24] Two sentences later, the document states that, "the Army is expanding and encouraging a broad range of assignment opportunities in academia, interagency, and multinational settings to prepare leaders for a complex and uncertain operational environment."[25] These two statements seem incongruent. Though the study of STEM disciplines is essential to the continued innovation in technologies and sciences

necessary for future success, it does not account for all of the challenges the Army is likely to face. To "ensure that leaders of tomorrow come into the force with the *right* set of skills" (emphasis added), the Army must encourage the study of social sciences and arts. This will prepare leaders to operate in ambiguous environments with joint, interagency, intergovernmental, and multinational (JIIM) teams where they must quickly assess complex situations and clearly communicate orders. Disciplines such as English, languages, cultural anthropology, sociology, and political science would have a profound impact in the success of future leaders.

This is especially true of the discipline of history. General George S. Patton once famously wrote to his son with the advice that "to be a successful soldier you must know history."[26] This is as true today as it was seventy-two years ago. The Vietnam War became a catalyst for the renewed study of military history in the Army–some of the results of which are evident in the interwar improvements that aided in the success of Operation Desert Storm. Nevertheless, an in-depth study of history today is left in the hands of motivated leaders pursuing extracurricular opportunities or in some higher-echelon schools that have a foundation in the study of history. Studying military history from multiple viewpoints early in a leader's career would provide junior leaders contexts and concepts with which to approach future military challenges.

<div align="center">Place greater value on education</div>

Increasing the amount of education that junior leaders receive will go a long way towards engendering intrinsic motivations to continue self-development, but it cannot work alone. The Army must also offer extrinsic motivations to underscore the value of education for members of the military profession. The institution can accomplish this by

requiring assessments for those wishing to attend PME schools, increasing the level of

rigor at those schools, and placing a greater weight on performance during attendance to

those schools. One way to emphasize performance during OES school attendance is to

track it throughout an officer's career. For example, a military school transcript that

follows an officer throughout his or her career would make it clear that the Army values

performance during OES schools. Furthermore, these transcripts could be used during

promotion or selection boards as distinguishing determinants. Finally, offering more

civilian education and fellowship opportunities–as well as time to take advantage of those

opportunities–will further demonstrate a commitment to education.

Place greater value on teaching

Finally, the Army must communicate its commitment to choosing and developing

the finest faculty at all PME schools. These faculty will not only impact leaders within

the institutional domain, they also have the potential to affect leader development in the

individual and operational domains. However, the Army must place a greater value on

those leaders who choose to teach others by weighting teaching positions highly during

promotion and selection boards, centrally selecting individuals for teaching positions, and

by providing additional opportunities for faculty development. Doing so will demonstrate

the importance of education in the Army and the leaders that choose to facilitate it

through teaching.

Research Question

In order to further evaluate these recommendations, this study will endeavor to

answer the primary research question: How would an initial set of recommendations that

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attempts to shift the balance between education and training in the Army's PME stand up to an in depth analysis?

To support that, the study will also consider a number of secondary research questions: How would the initial recommendations be implemented within a DOTML-PF framework?

1. How would the initial recommendations be viewed through the lens of individual stakeholders?

2. How would the initial recommendations be viewed through the lens of operational leaders?

3. How would the initial recommendations be viewed through the lens of institutional leaders?

<u>Assumptions</u>

The recommendations above are predicated on several assumptions. If these assumptions should prove invalid, the recommendations should be reconsidered:

1. Future OEs will remain complex and winning within them will require innovate, agile, and adaptive leaders.

2. The responsibility to address future challenges will continue to be placed on officers at all levels.

3. Education will continue to be an important part of leader development to develop the skills necessary to meet future challenges.

4. The AU will be the locus for leading changes to the Army's education system.

Conclusion

While no single model will adequately define the balance between training and education, it is clear that a greater emphasis on education is essential to preparing leaders to meet the challenges of future operations. The Army University is well placed to become a catalyst for this shift in balance, but changes in the behaviors must first occur to support the change. Tomorrow's challenges will likely take many forms and the Army's leaders must be adequately prepared to meet them. Future challenges will necessitate innovative and creative solutions from agile and adaptive leaders. To facilitate this, the Army must place a greater emphasis on education at all levels and within each domain to develop the creative and critical thinking skills necessary to meet tomorrow's challenges.

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[1] William Francis Butler, *Charles George Gordon* (London: Macmillan and Co., 1892), 85.

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[3] Ibid., 31.

[4] Training and Doctrine Command (TRADOC), *Human Dimension White Paper: A Framework for Optimizing Human Performance* (Fort Eustis, VA: U.S. Army Training and Doctrine Command, 2014), 16.

[5] Kelly C. Jordan, "The Yin and Yang of Junior Officer Learning: The Historical Development of the Army's Institutional Education Program for Captains," *The Land Warfare Papers*, no. 49 (2004): 1-11.

[6] Leonard Wong, "Developing Adaptive Leaders: The Crucible of Experience of Operation Iraqi Freedom" (Monograph, U.S. Army War College, Carlisle, PA, 2004), 2.

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[12] Ibid., 21.

[13] David A. Fastabend and Robert H. Simpson, "Adapt or Die: The Imperative for a Culture of Innovation in the United States Army," *Army* (February 2004): 15.

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[16] Headquarters, Department of the Army (HQ DA), *The Army Leader Development Strategy (ALDS), 2013* (Washington, DC: Government Printing Office, 2013), 11.

[17] Ibid.

[18] Jordan, "Junior Officer Learning," 2.

[19] Fastabend and Simpson, "Adapt or Die," 21.

[20] Robert A. Tipton, "Professional Military Education for the 'Pentathlete' of the Future" (Monograph, U.S. Army War College, Carlisle, PA, 2007), 11.

[21] John Kotter, *Leading Change* (Boston, MA: Harvard Business School Press, 1996), 97.

[22] See http://online.stanford.edu/; https://www.edx.org/school/harvardx.

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[24] HQ DA, *ALDS*, 8.

[25] Ibid.

[26] George S. Patton, "George S. Patton, Jr. to George S. Patton, IV, 6 June 1944," in *War Letters: Extraordinary Correspondence from American Wars*, ed. Andrew Carroll (New York: Scribner, 2001), 240.

CHAPTER 2

LITERATURE REVIEW

The present Army education system, while among the best in the world, is inadequate to address the growing complexity of the 21st Century security environment.[1]

— Training and Doctrine Command,
Army University White Paper

Introduction

The *Army Operating Concept (AOC)* describes the challenges of future warfare as

volatile, complex, and uncertain. It goes on to state that winning in such an environment

"will require innovative, adaptive leaders and cohesive teams who thrive in complex and

uncertain environments."[2] In order to meet those challenges, the institutional Army must

develop in leaders the appropriate skill sets. However, the PME that the Army operates

under is largely outdated and based on Industrial Age models. The arrival of the AU

signals a commitment to confronting the flaws in the Army's PME, but it does little to

address the balance between training and education. This study then fills that gap by

closely examining the history of the Army's education system, the attributes needed in

officers to meet today's challenges, education's role in developing those attributes, and

the future of the Army's education system. These topics make up the sections of this

literature review.

Each section in this literature review is divided into three categories: Military

Publications, Military Scholarship, and Civilian Scholarship. The first category is focused

on what the Army has published through official means on the topic. The literature in this

category includes doctrine, white papers, pamphlets published by the Army as well as

speeches, statements, and interviews made by senior Army officials. Military scholarship

encompasses literature written by military members or scholarship specifically focused

on military issues. This mainly incorporates scholarship published in peer-reviewed

military journals from the past ten years, but there are a handful of references outside of

that scope included in this section that help to build contextual understanding. Finally, the

civilian education category includes the books, articles, and material that pertain to the

concepts under consideration in this study. By the very nature of these categories, there

are some topics with no relevant literature in a category (e.g., civilian scholarship, by its

definition herein, will contain no literature about the history of the Army's education

system). In those cases, the category is removed.

History of the Army's Education System

Military Publications

The Army's education system has a long history dating back to at least 1802 with

the establishment of the United States Military Academy at West Point. Since that time,

there has been a myriad of reports, guides, white papers, and doctrinal documents

published by the Army concerning what is now called PME. For the purposes of this

study, the literature reviewed only considers the Army's education system after WWII.

From that time until now, the PME has undergone a significant amount of review and

changes. The most noteworthy official reports conducted by the Army are: the Gerow

Board of 1946, the Eddy Board of 1949, the Daley Board of 1961, the Haines Board of

1966, the RETO study of 1978, the Professional Development of Officers Study of 1985,

the TRADOC Reengineering Study of 1993, and the Officer Personnel Management

System XXI Study of 1997.[3] Additionally, the *Army Training and Leader Development*

Panel Officer Study Report of 2001 has had a direct impact on the current state of the

Army's PME and is particularly germane to this thesis.

Military Scholarship

There are a number of military articles and books written about the Army's

education system and its changes. Of particular interest are Colonel George C.

Reinhardt's "The United States Army Educational System," in a 1954 edition of *Military*

Review, and Michael Neiberg's 2000 book, *Making Citizen Soldiers: ROTC and the*

Ideology of American Military. These two documents provide some context about the

Army's PME and its changes over time and offer insight into the balance, or lack thereof,

between training and education.

Civilian Scholarship

Not surprisingly, civilian scholarship has little to say about the history of the

Army's education system.

Officer and Leader Attributes

Military Publications

Numerous military publications portray the importance of leader attributes such as

agility, adaptivity, and innovation. For example, the TRADOC Pamphlet 525-8-2, *US*

Army Learning Concept names agility as its central idea in meeting future challenges.

Additionally, TRADOC Pamphlet 525-3-7, *Human Dimension Concept* lists the

continued need innovate as one of its basic assumptions. However, three recent

foundational documents make it clear how important these traits are: *U.S. Army Capstone*

Concept (ACC), *The U.S. Army Operating Concept (AOC)*, and *2015 Army Posture Statement*.

The *U.S. Army Capstone Concept (ACC)* is a foundational document that outlines the way in which Army will meet strategic goals within the restraints of the national budget. It is derived from the *National Military Strategy* and it describes the capabilities that the Army will need in the future to meet national, strategic-level goals and to "win in a complex world." The document describes the complex world as one that is volatile, uncertain, complex, and ambiguous (VUCA), and it offers a plan for addressing the challenges of such a world. Furthermore, it describes how US Armed Forces will have to be able to operate as a part of joint, international, interorganizational, and multinational (JIIM) team to accomplish the mission. Important to this study are the implications that it has for PME. Specifically, in describing the ways in which the Army operations, the *ACC* highlights the need to "develop innovative leaders and optimize human performance."[4] This is particularly significant to the argument in this study.

Nested within the goals of the *ACC* is another foundational document for the US Army: *The U.S. Army Operating Concept (AOC)*. Using a framework of DOTML-PF (Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, and Facilities), it explains what the Army must do to accomplish the aims listed in the AOC. It is the conceptual basis for developing solutions to future problems. Within the realm of leader development and education, the *AOC* argues that, "one of the Army's greatest competitive advantages resides in its ability to learn faster and adapt more quickly than its adversaries."[5] Furthermore, it states, "what all Army operations will have in common is a need for innovative and adaptive leaders and cohesive teams that thrive in conditions of

complexity and uncertainty.[6] These ideas are central to the argument herein that advocates for a greater emphasis on education to develop such skills.

One additional military publication that describes leader attributes important to the Army is the 2015 *Army Posture Statement,* submitted to the house and senate by Secretary of the Army, John McHugh, and Chief of staff of the Army, General Raymond Odierno. Of particular interest is the chapter titled "Adaptive Army Leaders for a Complex World." This chapter reiterates what the *ACC* and *AOC* communicate, but also calls for an overhaul of the education system and a renewed focus on educational opportunities for future leaders. The argument of this study extends this idea to include officers at all levels in order to better prepare senior leaders.

Military Scholarship

Military scholarship of the past fifteen years is interspersed with scholars calling for the development of creative, agile, adaptive, critically-thinking leaders who can meet current and future challenges of the operating environment. Chief among these is Dr. Leonard Wong who has written much on agile and adaptive leaders. Wong's 2004 Strategic Studies Institute monograph, *Developing Adaptive Leaders: The Crucible of Experience of Operation Iraqi Freedom*, argues that the experiences of war developed many of the agile and adaptive skills that junior leaders needed at the time. This work is 34important when drawing connections between training and education through application. It also supports the argument that without the crucible experience, education must fill the void of developing agile leaders. Dr. Wong also wrote *Stifled Innovation: Developing Tomorrow's Leaders Today* in which he examines how the current Army system does not support the development of innovative leaders. With a specific eye

towards company commanders, he argues that the level of mandated training and requirements from higher echelons is stifling innovation. Though dated, this monograph is important in understanding the possible hindrances to developing innovative leaders amidst existing demands on Army leaders.

In a 2004 edition of *Army* magazine, David A. Fastabend and Robert H. Simpson wrote "Adapt or Die: The Imperative for a Culture of Innovation in the United States Army." This is an often-quoted article that describes the necessity for an adaptive and innovative Army. Though the authors do not put much emphasis on individual innovation, they do consider the culture that allows for such innovation. It is important to the argument about where innovation occurs and the importance of institutional behaviors driving change.

Similarly, Christopher Gehler argues in "Agile Leaders, Agile Institutions: Education Adaptive and Innovative Leaders for Today and Tomorrow" that a new model for officer's PME is necessary to meet the challenges that officers may experience in their careers. It is specifically focused on the CCCs, but it has applicability throughout the OES.

One final military article of note for this study is Clay Mountcastle's "The Myth of the New Complexity." In it he argues that today's operational environments are no more complex than past experiences. He disagrees with the trend in many doctrine and military publications that claim that today's military environments are more complex than ever before. The author uses many historical examples dating back to WWI to describe the challenges of past military environments. In doing so he makes a strong case for the enduring complexity of war throughout the ages. Though his argument is in line

with many of the assumptions used in this study, he does not address at what level those complexities of war have been solved. This study makes the argument that the responsibility to address and meet the complexities of war has steadily shifted to lower ranks over time.

Civilian Scholarship

There are countless examples of civilian scholarship extoling leader attributes of agility, adaptivity, creativity, and innovation. Many of these publications emphasize the necessity for such attributes in the workplace to ensure growth and change in organizations. Furthermore, these works emphasize the need for such characteristics in meeting challenging, novel situations. This study considers three works in particular to develop the argument for a change to the Army's education system. First, *Leadership Agility: Five Levels of Mastery for Anticipating and Initiating Change*, by William B. Joiner, discusses the levels of agility necessary for leaders in the business world. It argues that agility is key to success in a constantly changing and unknowable environment.

Next, *Managing Innovation and Change: A Critical Guide for Organizations* by Nigel King and Neil Anderson discusses tools and methods to manage innovation and change in organizations. Though primarily offered as a guide, this book does examine the psychological principles and theories behind innovation. These theories lend themselves well to identifying ways in which to incorporate innovation in a large organization like the military. Finally, the *Harvard Business Review* article "Adaptability: The New Competitive Advantage" addresses the advantages of adaptability in organizations. Though primarily focused on business environments, Martin Reeves and Mike Deimler argue in this article that the recent increase in globalization, emerging technologies, and

transparency has led to a lot of uncertainties and challenges in creating business strategies. The answer, the authors argue, is adaptability. Organizations that are able to adapt and quickly incorporate change are the most successful in meeting the unexpected challenges that current business environments present. The applicability to military organizations is clear given the current operating environment.

Education's Role

Military Publications

Though no military publications describe the balance between training and education for the Army, there are a handful of documents that acknowledge the important role that education has in developing leaders. The most useful document for the purposes of this study is the *Army Leader Development Strategy (ALDS) 2013*. The *ALDS* outlines the three pillars or domains of leader development: the operational domain, the self-development domain, and the institutional domain. The model is designed to support the concept of life-long learning as a professional pursuit. It is important to this study in its description of each leader development domain and the role of education within those domains. Additionally, TRADOC Pamphlet 525-3-7, *Human Dimension Concept,* ADRP 6-22, *Army Leadership* and DA Pamphlet 600-3, *Officer Professional Development and Career Management,* all describe the way in the Army develops its leaders and the typical timeline for PME. If many of the solutions described in this study are to be adopted, these documents will have to be updated.

The link from the Army's capstone and operational concepts to education's role within them is communicated in the *Army Strategic Planning Guidance (ASPG)*. This document serves to provide the guidance, direction, and strategy to implement the goals

outlined in the Army's higher-level strategic documents. Of particular importance to this study is the document's focus on meeting the Army's strategic priority of creating "Adaptive Army Leaders for a Complex World."[7] To do this, the ASPG emphasizes the importance of education:

> Institutionally, the Army must have capabilities and processes responsive to and capable of change to meet the Nation's demands. That adaptation entails building the force from an intellectual seed corn that must be protected, rather than used as a manpower bill payer for shortages in the Operating Force as in previous times of austerity . . . [this] requires true investments in education, not solely for their academic credentials, but to better enable the force to rapidly adapt to future uncertainty in ways that training and doctrine alone cannot address.[8]

These concepts are key to building the case for a greater focus on education in the Army's PME to better prepare leaders for today's OE.

Military Scholarship

Though the balance between education and training in the Army has been an ongoing debate for many years, only a handful of authors have written in response to the Army's post-911 role. Four of note are Jeffrey McCausland, Gregg Martin, Kelly Jordan, and Robert Tipton.

McCausland and Martin. "Transforming Strategic Leader Education for the 21st-Century Army" argues that the operating environment (of 2001) necessitates leaders that are prepared to face uncertainty with critical thinking skills. It goes on to argue that education is the way in which the Army can accomplish this. Of particular importance are the models they use to describe leader development. Specifically, they recommend "training for certainty" and "educating for uncertainty." Though dated, this article was essential to setting the stage for further studies and discussions of the issue.

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In 2004, Kelly Jordan picked up the discussion when he wrote "The Yin and Yang of Junior Officer Learning: The Historical Development of the Army's Institutional Education Program for Captains" in an issue of *The Land Warfare Papers*. In this study, Jordan argues that the Army must place a greater emphasis on education early in an officer's career to adequately prepare leaders for current operating environments. The author uses Bloom's taxonomy as a framework to describe levels of cognition. However, Jordan's argument is limited in its scope solely to the Captains Career Course. Furthermore, his argument is focused on the operating environment (OE) of 2004 and does not reflect the possibilities that the Army University offers.

Additionally, Robert Tipton's study titled "Professional Military Education for the 'Pentathlete' of the Future" builds off of McCausland and Martin to argue that the challenges of the OE (in 2006) demand leaders to master skills at tactical, operational, and strategic levels, and become more familiar with dealing with "non-kinetic issues" much earlier in an officer's career. The author locates the PME as the venue to drive change to meet the requirements for critical thinkers or "pentathletes," as he describes them. This can be accomplished in a continuing Officer Education System that functions across all three leader-development domains. Though this report is a bit dated, it does mirror many of arguments within this study for developing critical thinking skills earlier in an officer's career. Nevertheless, his study does not employ a theoretical lens with which to understand the drive the educational change nor does it offer specific ways in which to execute the change.

More recently, two publications have taken up the argument to revitalize the Army's PME system. In his 2008 monograph, "Strategic Leader Development for a 21st

Century Army," James Hardaway argues for a specific skill set that strategic leaders must have to be successful in today's operating environments and locates the onus for developing those skills on the OES. Similarly, in a 2009 USAWC Strategic Research Project, Shawn Reed argues that strategic leaders need a different skill set in order to be effective in the decision making process associated with the unique requirements of JIIM. In it, Reed argues that the Army's PME should drive change in updating these processes. These arguments are helpful when considering the ways in which the education system develops future leaders and the difference between organization and strategic-level leaders. Though strategic-level leaders still leading organizations, they have additional requirements to operate within a JIIM environment and influence policy-makers. However, both arguments do not address all of the benefits that a change in the Army's PME would bring. These changes affect not only future strategic leaders who operate in JIIM environments; they also impact leaders at every level and the professionalism of the Army more broadly.

<div align="center">Civilian Scholarship</div>

Benjamin Bloom's *Taxonomy of Educational Objectives* is a seminal work in pedagogy and it provides a framework with which to consider the Army's PME. The different educational cognitive goals described by Bloom are hierarchical and build upon each other to provide a greater level of understanding. This study argues that education resides within the higher cognitive domains of Bloom's model, while training is more closely associated with the lower domains. Additionally, the "application" domain is the connection between education and training experienced in the Army's operational leader development domain.

In 2001, Lorin Anderson and David Krathwohl revised Bloom's taxonomy to address many of the criticisms. In their book, *A Taxonomy for Learning, Teaching, and Assessing: A revision of Bloom's Taxonomy of Educational Objectives,* the authors offer a new taxonomy for the cognitive domain. Besides changing the nouns into verbs and switching the highest two cognitive domains, the authors explained how the cognitive processes interact with the cognitive process levels.[9] Their revision is an important part of this study's discussion of the cognitive levels involved in PME's training and education.

The Future of Army Education

Military Publications

Though many of the Army's strategic and conceptual documents lay the foundation for the future of the Army education system, the literature concerning the Army University is the clearest indicator of things to come. The *Army University White Paper* provides a general description of the AU, administrative details on how it will operate, and the background leading up to its establishment. Additionally, the *Strategic Business Plan for the Army University* provides a detailed description of how the Army plans to implement the AU. Taken together, these two documents provide a clear vision of the AU and the stakeholders involved. Furthermore, the advent of the AU itself communicates a message of commitment to education on the Army's part. However, though the goals outlined in these documents are ambitious and numerous, there are still a myriad of gaps, the most glaring of which is the dissonance between the AU's goals and Army's values. The AU is based on an assumption that the values of the Army will shift to match the goals of the organization. On the other hand, the recommendations in

this study are offered to shift the behaviors of the institution to match the goals of the AU.

The AU is making strides to stay current with pedagogical trends. In December of 2015, the Army University held its first annual education symposium at Fort Leavenworth, Kansas. The symposium brought together over 250 educators from across various civilian and military institutions of higher education not only introduce the Army University but also to discuss current pedagogical trends and recommend revisions to the Army's PME. One panel focused on producing relevant, rigorous curriculum while another considered how best to develop quality faculty within the AU. A third panel different types of learning environments and offered suggestion for how the Army could best leverage available technologies to reach larger audiences. These presentations and discussions have an impact to the recommendations in this study as they represent some current ideas for how the AU can best implement its goals. Additionally, though limited in scope, this symposium does indicate a commitment from the AU to remaining current and at the forefront of pedagogical developments.

<div align="center">Military Scholarship</div>

Many authors have responded to the advent of the AU. In their July-August issue of 2015, *Military Review* focused all of their articles on the AU. In it are numerous articles from senior leaders praising the AU's vision or explaining its function. However, given the infancy of the AU, not many authors have yet to offer significant critique of the AU nor have many authors recently considered the future of Army education. One exception to that is Keith Ferguson whose article "The Army Learning Model: An Example of Cognitive Dissonance" addresses some gaps in the Army's education.

Specifically, he argues that the Army has not sufficiently implemented the learning model described in the *Army Leader Concept (ALC) 2015*. He goes on to state that the Army's training must be updated to meet the intent of the ALM. The author offers some solutions for how to go about doing this. Though the author does not give much attention to the role of education in the ALM, he does offer three solutions that are of particular interest to the argument of this study: an MOS for educators, an annual conference for Army educators, and a way to connect educators across the Army and synchronize their efforts.

Civilian Scholarship

There are countless articles, journal, books, and lectures that discuss current and future pedagogical trends. For the scope of this study, it was important to focus the research of relevant civilian scholarship as it relates to the given recommendations. To that end, the literature surveyed concerned the effectiveness of MOOCs, the importance of history, the relevancy of reading and research, trends in self-driven study, and the value of the arts and social sciences. However, these documents, though important to the larger academic community, do not make the link between the pedagogical techniques and the OES.

Furthermore, since this study recommends significant modifications to the institution, it was important to also account for scholarship concerning organizational change. John Kotter's book, *Leading Change*, is one of the most influential in this area. Relevant to this study was his argument that behaviors must match intended values in order to affect change in an organization.

Summary and Conclusions

As evident from the survey of relevant literature, much work has been done concerning the Army's leader development model and the balance between education and training. However, it is clear that with the new challenges that the Army faces in the volatile, uncertain, complex, and ambiguous (VUCA) OEs of tomorrow, leaders today must be adequately prepared. According to the *Capstone Concept for Joint Operations: Joint Force 2020*, "Future Joint Forces will face an increasingly complex, uncertain, competitive, rapidly changing, and transparent operating environment characterized by security challenges that cross borders."[10] The Army's education system has the potential to prepare officers for the complexities they will face. Additionally, with the advent of the AU, the Army is once again poised for a shift in the education system. Therefore, much of the existing scholarship and relevant literature on the topic is lacking in its relevancy to today's challenges. This study then fills that gap by carefully considering the challenges that today's OE present, the skills necessary to meet those challenges, and the PME's role in developing those skills.

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[1] Training and Doctrine Command (TRADOC), *Army University White Paper: Educating Leaders To Win in a Complex World* (Fort Leavenworth, KS: The Army University, 2015), 4.

[2] TRADOC, *AOC*, 12.

[3] See Jordan, "Junior Officer Learning," for a general overview of these reports.

[4] Ibid., 20.

[5] Ibid., 21.

[6] TRADOC, *AOC*, 16.

[7] Ibid.

[8] Headquarters, Department of the Army (HQ DA), *Army Strategic Planning Guidance (ASPG), 2014* (Washington, DC: Government Printing Office, 2014), 11.

[9] See Appendix A.

[10] Martin E. Dempsey, *Capstone Concept for Joint Operations: Joint Force 2020* (Washington, DC: Government Printing Office, 2012), 15.

CHAPTER 3

RESEARCH METHODOLOGY

Introduction

The purpose of this study is to analyze a set of recommended changes to the Army's PME system that purport to shift the balance of training and education. This study was completed through qualitative research examining artifacts pertinent to the topic including books, journals, studies, doctrine, speeches, interviews, and statements. The method used for this research was a case study methodology. By examining the current status of the Army's PME through a narrow scope it recommended four initial solutions that are further analyzed in the proceeding chapters. These informed policy recommendations are intended to persuade Army decision-makers that such changes are necessary to shift the balance in the PME towards education.[1]

This chapter is divided into three parts. The first part of this chapter will describe the process, models, lens, and values used to conduct the study. It will describe the DOTML-PF model and the Capabilities-Based Assessment (CBA) process that the Army uses to analyze recommendations and solutions. The second part of this chapter will describe the steps in the analytical process used to evaluate the initial set of recommendations. The final part of this chapter lists and describes the intended audience and stakeholders who may be involved in the recommended changes. For each stakeholder, this part of the chapter will define his or her values, interests, and primary concerns. In doing so, it will allow for an in depth analysis of argument in order to produce a set of suitable, feasible, and acceptable solutions for the Army's education system.

Lens

The solutions recommend herein were analyzed through a lens of the Army's CBA process in order to ensure that they are communicated in actionable plans that adhere to Army processes. The CBA process is the Army's way to assess current needs and create appropriate solutions, or capabilities, to meet those needs. The CBA process is broken down into three steps. Using inputs from existing guidance, the Functional Area Analysis (FAA) determines the future required capabilities needed to meet the challenges of the operating environment. In this study, the FAA took place in chapters one and two with the identification of necessary capabilities evident through the review of literature. The Functional Needs Analysis (FNA) compares the future requirements to the current set of programmed capabilities to determine the gaps and risks. This took place in chapters one by examining the gaps in the Army's current PME model. Finally, the Functional Solutions Analysis (FSA) uses a DOTML-PF analysis to determine the solutions to fill identified gaps. From this process a set of prioritized DOTML-PF solutions are created. For this study, the FSA took place in chapters four and five with the revised recommendations that are communicated through DOTML-PF requirements (see Appendix B).

Model

The Toulmin Model was used to further analyze the argument first described in chapter one. First proposed by British philosopher Stephen Toulmin, the Toulmin Model (or Toulmin Method as it is often called) seeks to dissect arguments to their essential parts of claim, evidence, and warrant in order to subject those parts to careful analysis and evaluate their effectiveness in supporting the overall argument. By doing so, this

model allows a critical reader to objectively assess the claim's validity.[2] In terms of this study, the Toulmin Model was used to subject the initial claims made to careful analysis given specific criteria for validity.

<p style="text-align:center">Criteria</p>

The Army generally tests validity by considering an argument's feasibility, acceptability, and suitability. The "FAS" test, as it is so called, has its origins in the Military Decision Making Process (MDMP) as a way to test the validity of various proposed courses of action. Feasibility is simply if the solution is practical and possible within current constraints. Suitability means that the given solutions appropriate address the problem at stake and are fitting for the particular situation. Finally, acceptability means that the solutions satisfactorily meets the concerns and needs of each user and is generally agreeable. The case study methodology was employed in this study to ensure that each recommendation passed the test for feasibility, suitability, and acceptability (FAS). To do so, the recommendations were analyzed through the lens of various stakeholders whom the changes may affect.

<p style="text-align:center">Standards by Stakeholder</p>

For the purposes of this study, the recommendations must pass the FAS test in the eyes of the stakeholders that might be affected. Therefore, it is worth describing the most relevant stakeholders to better understand their standards for validity. These stakeholders line up with the three domains of leader development outlined in the *ALDS*.

1. Individual Officer–The individual officer is concerned with the value of the changes, the costs associated with the solutions, and the impact those changes

will have on his or her career. Any changes to the Army's PME must be reasonably achievable given the myriad of demands that officers face daily. Questions that the individual stakeholder may have include: What do I have to give up in order to place a greater emphasis on education? How will my career be affected if I am not good at academics? What will this focus on education do for me?

2. Senior Army Leaders and Operational Leaders–The primary concern of senior Army leaders operational leaders will be the trade-offs associated with the recommendations. Given the current strain of directed training, higher-echelon requirements, and readiness preparation, operational leaders would be understandably concerned with any additional requirements that cost money and time. Additionally, the operational leaders are the bottom-line end users of the effects of these changes. Therefore, they would be concerned with the actual value that a greater emphasis on education would bring to their unit and to their mission success. Questions that they may have include: What are the trade-offs of implementing the solutions? How will these changes make for a better-prepared field Army? How will these solutions ensure that units are ready for combat?

3. Institutional Army Leaders–The key concerns for the institutional army leaders are the tradeoffs associated with implementing such changes. They would want to ensure that they could execute the recommended solutions and integrate ideas across doctrine, resources, and materiel demands given the current set of requirements they have. Additionally, they would likely want to ensure that the

changes resulted in the best outcomes for faculty and students alike. Questions

that they may have include: How will we be able to implement these changes

given the current set of demands? If we place a greater emphasis on education,

what do we drop off the curriculum? What do these changes do for the

institutional Army at large?

Conclusion

The intent of this research-based methodology is to thoroughly analyze the initial

set of recommendations in order to arrive at actionable solutions that the Army can

implement to shift the balance of the Army's PME towards education. The Toulmin

model ensures that each of the initial recommendations follow sound, logical

argumentative techniques. Using a lens of CBA and DOTML-PF ensures that the final

recommendations are couched in terms that make sense to Army decision makers.

Finally, each solution is considered from the viewpoint of various stakeholders that

would be affected by the changes to ensure the validity of the recommendations. This

process ensures a thorough analysis of each recommendation in an effort to arrive at valid

solutions to current gaps in the education system.

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[1] See Appendix B.

[2] Stephen Toulmin, *The Uses of Argument* (New York: Cambridge University Press, 1958).

CHAPTER 4

ANALYSIS

Introduction

This study initially set out to analyze the current state of the Army PME and to determine the balance between training and education given the future challenges that junior leaders are likely to face, and it offered four recommendations to help achieve the new balance. Through a case study methodology, it analyzed each of those recommendations for their validity by considering not only the Army model for change– that is the CBA process–but also by considering the solutions through the lens of three primary stakeholders that would be most affected by the change. Through this analysis, this study aims to arrive at a set of achievable and valid solutions to help the Army place a greater emphasis on education and its PME. That being the case, this chapter discusses the results of that thorough analysis.

This chapter is divided into four parts based on the four initial recommendations. Within each part, the recommendation is first analyzed using the Toulmin Model to assess the validity of the argument. Then the recommendation is evaluated through from the standpoint of the CBA process to consider what changes in DOTML-PF the recommendation implies. This portion of the chapter represents the Functional Solutions Analysis area of this study in that it communicates necessary capabilities through DOTML-PF solutions to fill identified gaps. Finally, each recommendation is considered through the lens of each of the three pertinent stakeholders in order to further assess its validity. Through such focused methodology, the study can produce a set of valid, informed policy recommendations for change.

<u>Results of Claim One Analysis</u>

The first claim from the recommended solutions is that the Army should put a greater emphasis on self-study. As described in *The Army Leader Development Strategy*, one of the three domains of leader development is self-development. The ground for this claim is that the self-development domain plays an important role in continuing education and filling the gaps that the institutional and operational domains cannot fill. It is also important in developing expertise. However, without meaningful incentives–either external or internal–such self-development is unlikely to occur. There are of course exceptions to the generalization that leaders need incentives to pursue self-development. The counter argument to such a claim is that leaders should be intrinsically motivated to self-develop. The argument follows that the Army wants officers who are willing to take ownership of their own self-development. While this is true, and there are many examples of officers and leaders who take it upon themselves to self-develop, it is important that the Army reinforces such values through their behaviors. That is, in order for the Army to advocate the importance of self-development, the actions and rewards that the Army offers must reflect. To that end, the recommended solutions of adding a block for self-development on the ORB and formalizing self-development programs in operational units would underline the importance of this leader development domain.

In order to enact this change, there would have to be capabilities added in the doctrine, organization, and leader development domains of DOTML-PF. In terms of doctrine, current literature would have to change to reflect the addition of a scholarship block to officer record briefs. Additionally, the doctrine would need to provide guidance on what types of scholarship to emphasize, and how to create self-development programs

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in units. Changes to the organization domain would mostly be focused on the Army University, which could facilitate self-development through the creation of MOOCs. A part of the AU should focus energy on transferring courses online so that interested, self-motivated leaders can pursue such opportunities. Finally, the leader development piece of DOTML-PF must be changed in order to provide leaders the tools necessary to facilitate rigorous self-develop programs both in unit and throughout individuals' careers.

From the individual stakeholder perspective, the initial recommendation of placing a greater emphasis on self-study, and the associated techniques to do so, may cause some concerns. First, the individual would be concerned with the time it would take to invest in self-development. While self-development is already a part of the leader development framework, it is not emphasized in the current Army culture, and is therefore often neglected or at least marginalized. Placing a greater emphasis on it, however, would force individuals to put more time and effort into self-development. In order to do so, the individual would have to sacrifice other obligations. Additionally, the initial recommendation of adding a scholarship and self-development block to the officer record brief may cause consternation for the individual stakeholder. If these changes were made, individuals would have to strive to create scholarship in order to receive top reports and succeed in their careers. This may produce unwanted effects. Nevertheless, greater emphasis on self-study would lead to intrinsically and extrinsically motivated leaders who pursue their interests in order to continue their professional development. Across the Army and across time, this would lead to a more agile and adaptive organization.

Adaptive officers would clearly benefit operational leaders and help assuage their concerns in leading combat-ready units. However, operational leaders would be concerned with the tradeoffs necessary to implement such changes. Specifically, formalized self-development programs might detract from other operational army requirements. Therefore, before making the changes recommended herein, operational leaders would have to understand the benefits that education brings to their leaders. Additionally, operational leaders would be concerned with the tradeoffs in time and readiness that would arise with the recommended solutions. Further study is necessary to better understand these tradeoffs and recommend which requirements should be cut in order to make room for self-study.

For the institutional leader stakeholder, this recommendation would have many benefits. First, it would allow individuals to fill the gap between OES schools with their own self-development. This would make for better-prepared leaders who intrinsically value education. Also, an increase in scholarship from individuals throughout the Army would open the institution to more viewpoints, which would in turn encourage critical thinking. Additionally, some of the burden of education that is expected to take place in the institutional army can be supplemented through online courses. However, the effort to create such online courses would require many additional capabilities in the institutional army. Though many of the classes and faculty already exist, the infrastructure to support MOOCs would have to be created. Finally, the institutional leader would be concerned with an Army-wide requirement to produce scholarship because it may lead to a large amount of subpar scholarship. In order to mitigate this, it is important that opportunities for publication remain peer-reviewed and the requirements to be published remain

rigorous. That being said, the initial recommendation to include scholarship as part of the OER may cause a myriad of concerns of the institutional, operational, and individual stakeholder and will need to be revised.

<u>Results of Claim Two Analysis</u>

The second recommendation argues for a greater emphasis on the study of social sciences and arts. The grounds for this claim is that the critical and creative skills practiced in disciplines within social sciences and arts are attributes that the Army values. The warrant for this claim is that through studying such disciplines, more officers would develop the skills that lead to agility and adaptivity. Evidence supporting this claim is clear in much of the civilian literature surrounding the discipline.[1] One counter-argument to this claim is that the study of STEM disciplines is an important aspect of the military. Though this is true, and the continued effort in STEM is important to developing future technologies within the Army, it is important we also invest in our human capital through the development of creative and critical thinking skills that comes with the study of the disciplines within social sciences and the arts. That is not to say that all officers need to have a background in these disciplines. Rather, an increase in the emphasis on these subjects would be beneficial to the Army at large. Furthermore, the study of social sciences and arts can have a role in the Army's PME. For example, the study of history should have a significant place in the curricula at all OES schools.

The most significant changes across DOTML-PF for this solution are those within the organization, leader development, and personnel domains. Leader development schools within the OES would have to facilitate a greater access to these disciplines through its structure, its curriculum, and its faculty. It is important that the Army employs

subject matter experts to teach these disciplines and to reinforce their importance to military leaders. Furthermore, organizational changes might help facilitate this solution. For example, desirable branches could favor newly commissioned officers who studied disciplines within the social sciences and arts. This would incentivize individuals to study within these disciplines.

For the individual stakeholder, this change would lead to a shift in the focus of OES schools. For some, this will be a welcome change. For others that are less inclined to pursue these disciplines, this will create additional burdens. Additionally, an emphasis on the study of these disciplines within the OES creates more work for individual student. The benefits of such pursuits have already been demonstrated, but this will be a concern with some nonetheless.

For the operational leader, this solution will have minimal impact. Most branches will still be able to meet their operational goals with a greater emphasis on the social sciences and arts. In fact, the creative and critical thinking skills that are developed in such disciplines, would lead to better-prepared leaders for meeting challenges in a complex operating environment. That is not to say that STEM disciplines do not emphasize critical thinking, but rather the disciplines within social sciences and arts bring with them unique perspectives that would facilitate the successful execution of operational missions.

In the lens of the institutional leader, this would create additional requirements in the organization and development of faculty. Specifically, faculty would have to be trained in such disciplines themselves in order to educate others. That being said, greater emphasis on these disciplines across the Army would lead to personnel trained within

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these disciplines and capable of augmenting the existing faculty to educate within these disciplines.

<p style="text-align:center">Results of Claim Three Analysis</p>

The third solution claims that a greater emphasis on education throughout the Army is necessary to create or develop leaders able to meet future challenges. The warrant for such a claim is explained throughout Chapter One. Specifically, the argument is that a greater emphasis on education leads to agile and adaptive leaders able to overcome complex problems. This is not to say that there is no place for *training* in the PME. However, a healthy balance between training and education is necessary to develop the attributes desirable in future leaders so that leaders, when faced with new challenges, can critically consider and choose between existing or novel solutions.

Within the DOTML-PF framework, this solution would require changes to the doctrine, leader development, and personnel domains. The majority of changes that would lead to a greater emphasis on education would take place in the doctrine domain. Specifically, in order to facilitate a military education transcript that follow officers throughout their careers, the doctrine would have to reflect this emphasis. Additionally, leader development within the institutional army should highlight education by requiring students to apply and compete for spots in OES schools. Doing so would elevate performance in the schools and underline the importance of education in officer's career. Finally, organizational changes would be necessary to facilitate more opportunities for civilian education.

The implications for this solution to the individual stakeholder are many. First, an increased rigor to the curriculum within OES schools would add additional pressure to

officers at a time when they may be in need of a break. Additionally, a transcript that follows officers' careers could have negative impacts for individuals who do not put adequate focus on academics in any school. However, such concerns would lead to more attention and studiousness in academic environments. Thirdly, a selection process for entrance to OES schools would mean that some officers would not have the opportunity to attend certain schools. This would negatively impact the individuals who are operationally proficient yet struggle academically.

For operational leaders, the selection process to attend OES schools would also have an impact. Specifically, those officers who performed well in units but are not able to perform well academically will not have as many opportunities. An increased focus on academic performance and civilian education opportunities may detract from officers' performance in operational units. However, the benefits of a renewed emphasis on education would lead to officers capable of the critical thinking skills necessary to perform and succeed in future complex environments.

Within the institutional domain, stakeholders might be concerned with the additional requirements to screen potential applicants to OES schools. However, this would lead to a higher quality student body, and would facilitate more rigorous academics. Also, an academic transcript that follows an officer would require additional efforts from institutional domain to facilitate accurate and timely reports. The Army University is well placed to facilitate this change, and has even suggested such a change in the Army white paper.[2]

Results of Claim Four Analysis

The final recommended solution in chapter one claims that a greater emphasis on teaching would lead to better and more capable faculty in PME schools. Though the Army recognizes the importance of quality instructors at it OES schools, the current system does not support individuals who pursue faculty positions. For example, selection boards weight operational experience over faculty experience. While this is understandable for the selection of operational leaders, it means that the highest caliber leaders who are pursuing command positions would not likely take faculty positions during their careers. This can have negative consequences on the quality of instructors at OES schools. The counter argument to this claim is that those who are driven to teach will choose faculty positions regardless of the consequences. While this may be true, it does not encourage high caliber leaders to choose that route, nor does it demonstrate appreciation to the individuals who do pursue such positions.

From a DOTML-PF perspective, changes would have to be made in doctrine, organization, and leader development domains. Within the doctrine domain, changes would have to be made to emphasize the selection of quality faculty and the significance of their teaching experience during promotion and selection boards. In the organizational domain, the changes would have to be made to facilitate centrally selected faculty. This would require the Army University working in coordination with human resources command to ensure that only the highest caliber officers are selected for faculty positions. In the leader development domain, the Army should create additional opportunities for faculty development, such as degrees in teaching, teaching certifications, and continuing education.

For the individual stakeholder, this change would open up many opportunities for those wishing to pursue faculty positions. Individuals who may have been wary of taking on teaching positions previously due to the possible effects such a move may have on their careers, would now be free to select such jobs. Additionally, opportunities for faculty development would mean that individual stakeholders would have additional education and training that would not only make them successful teachers within the Army, but would also provide future opportunities once those individuals leave the Army. This has a secondary effect of producing quality teacher-veterans that can positively influence civilian populations.

For the operational leader, the consequence of a greater emphasis on teaching might be fewer quality leaders available for positions in operational units. However, when those faculty members, that have been trained and valued during their tenure as teachers, return to the operational army, they bring them with them a skill set to further develop other leaders. This, in turn, would facilitate leader development in the operational domain.

For the institutional leader, this would have the clear benefit of producing a higher caliber faculty across the board. However, there would be additional work and changes necessary to facilitate centrally-selected faculty. Additionally, the institutional army would have to facilitate continued development of its faculty. This would lead to trade off in time and money to allow for such development.

<u>Conclusion</u>

Through a thorough analysis, it is clear that the initial solutions offered in the chapter one still have value. The Toulmin Model provided a tool to analyze the argument

within each solution to ensure its validity. That validity was further tested against a

DOTML-PF model. Each solution was then considered through the lens of interested

stakeholders such as the individual, the operational leader, and the institutional leader.

Through this process, each solution was closely considered and possible problems with

the solutions identified. Though some of the solutions may have to be reexamined or

further studied to ensure the ease of transition, they still remain valid. These issues as

well as recommendations for action will be further discussed in the next chapter.

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[1] See Scheuer and Leach

[2] TRADOC, *Army University White Paper*, 11.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Introduction

The previous chapter analyzed four initial recommendations using the Toulmin

Model and the Army's process for change while considering them through the lens of

invested stakeholders. By doing so, it subjected those recommendations to a thorough

analysis to test their validity and effectiveness. It found that the four initial claims, though

generally sound, were in need of a few revisions before they could become actionable.

This chapter then discusses the findings of the analysis, and makes recommendations for

revision, action, and further study to tip the balance towards education in the Army's

PME. To that end, this chapter is organized into three parts. The first part summarizes the

findings from chapter 4 and discusses the implications of those findings. The second part

of the chapter recommends areas for further study. The third part of the chapter discusses

recommendations for action given the analysis of the initial solutions.

Implications of Findings

The previous chapter's analysis of the four recommended solutions provided

insight into the validity of each. The first solution, to place a greater emphasis on self-

study, is a valid one. However, parts of the solution should be revised given the concerns

that various stakeholders may have. Specifically, the recommendation to include a block

on the OER to denote scholastic accomplishments during operational assignments must

be reconsidered. As demonstrated, the consequence of such a change might have

significant unwanted effects across multiple domains. Nevertheless, the recommendation

to include a block in the ORB for scholarship is still a valid one. Additionally, the recommendations to create MOOCs and organization-led self-study programs are both valid and should be implemented.

The second solution, to put a greater emphasis on the study of social sciences and the arts, seemed at face value to be valid. However, given the difficulties in implementing such a solution and the possible trepidations in doing so, this solution is in need of further examination. Though the study of the social sciences and arts is important to develop critical and creative thinking, it is not the only method in which to do so. Additionally, the STEM disciplines will continue to be necessary to keep pace with the emerging technologies and a shrinking globe. That being said, future technologies alone will not win tomorrow's wars. It will take a significant investment today in the Army's human capital to ensure success in the operating environments of tomorrow.

The third solution, to put a greater emphasis on education, stood up to initial analysis across the DOTML-PF framework and from the viewpoints of various stakeholders. It makes sense that the Army emphasizes the importance of education in both its literature and its actions. An application or selection process to attend OES schools and additional opportunities to attend ACS would have this effect. Similarly, a military transcript that follows an officer throughout his or her career and has an impact on promotion and selection will also communicate the value that the Army places on education.

The final solution, to place a greater emphasis on teaching, is a sound one that stood up to validity tests from the lens of stakeholders. It is imperative that the Army demonstrates support of its faculty in order to recruit the highest caliber officer as

teachers. To do this, the recommendations of weighting teaching jobs during selection and promotion boards and providing additional faculty development opportunities make sense. Furthermore, the concerns that various stakeholders may have could be easily assuaged.

<u>Recommendations for Further Study</u>

As stated above, there are several recommendations identified which would benefit from further study. First, it is important to analyze the trade off that each solution requires. Specifically, further study should examine the costs to implement said solutions and the sacrifices that would have to be made in order to do so. The scope of this paper does not allow for such an in-depth analysis, but it would be necessary in order to facilitate these changes. Next, further study should consider the process through which these solutions are developed, implemented, and maintained. This study recommended a handful of changes within the DOTML-PF framework to facilitate the changes, but further analysis must take place to ensure that the solutions are effective. Finally, given the potential issues with the second recommendation to place a greater emphasis on the study of social sciences and the arts, there is a need for further study in how to best implement such a recommendation. Though the justifications for such a change are still valid, the potential secondary and tertiary effects of the change must be further examined.

<u>Recommendation for Action</u>

As indicated above, the second recommendation to place a greater emphasis on the study of social sciences and arts needs to be furthered examined before being affected. That being said, the inclusion of more history in the curriculum of OES schools

can be implemented immediately. Furthermore, with a few changes, the remaining three recommended solutions should still be implemented.

The first solution to put a greater emphasis on self-study is valid and in line with many of the values of the individual, operational, and institutional stakeholder. Therefore, it should be further studied, as indicated above, and implemented. Given the recommendations within this solution, the process to implement it will take time, but certain changes can begin immediately.

The third recommendation to place greater emphasis on education is a sound one that can be executed straightaway. Given the concerns from the perspectives of the individual and operational stakeholders, it would be wise to balance both operational and academic performance when selecting officers to attend OES schools. Nevertheless, it is essential that the Army's behavior match their stated values in supporting the pursuit of education. The benefits of such a change will be immediately clear.

The final solution to place a greater emphasis on teaching is valid and should satisfy the concerns of the individual, operational, and institutional stakeholders. This too can be implemented in the near future. To do so will take a good deal of collaboration between AU and other entities, such as HRC, but the benefits of valuing teaching outweigh the costs.

<div align="center">Conclusions</div>

This study set out to examine the balance of training and education in the Army's professional military education system given the demands that today's officers face. Though the operating environments of the future will likely be as complex as those of the past, the nature of conflict will change as the burden to solve tomorrow's challenges fall

to more junior leaders. Given globalization, emerging technologies, and the ever-growing pervasiveness of social media, young officers of tomorrow may have to make tactical decisions with strategic implications. Therefore, officers at all levels must be adequately prepared to think critically and creatively. They must be knowledgeable enough to be able to apply existing doctrine, innovative enough to create new solutions, and have enough cognitive competence to choose between the two.

The answer to developing these skills is education. A focus on quality education throughout all of the leader development domains will ensure that officers are prepared meet tomorrow's challenges. Though the Army's PME is still largely based on Industrial Age models, the system is on the verge of change with recent events such as the advent of the Army University and the rewriting of the *Army Leader Development Strategy*. Now is the time to ensure that the Army's PME places the appropriate emphasis on education and the four revised solutions herein are the tools to do so. It is only through such significant changes that the Army can ensure that its leaders are adequately prepared to meet the challenges of the future and to "win in a complex world."

GLOSSARY

Institutional Army. A part of the Army whose primary function is to support the operational Army through providing the infrastructure to raise, train, equip, deploy, and ensure readiness for Army forces. Beyond its equipping, logistical, and power projection functions, the institutional army also trains and educates Soldiers through professional military education.

Massive Open Online Courses. Open academic courses available online to facilitate distance learning. MOOCs are often supplemented with course materials, lectures, and open forums to support a larger learning community. Some MOOCs also offer certification or credentialing at the course's completion.

Officer Education System. The progressive and sequential education process for officers in the Army that includes the following courses: Basic Officer Leader Course, Captains Career Course, Intermediate Level Education, School of Advanced Military Studies, School for Command Preparation, and the Army War College.

Professional Military Education. The collection of schools, training programs, and development programs that train and educate Soldiers. PME is both the formalized developmental schools that the Army offers and the informal leader development opportunities that the Army encourages to sustain a professional military.

APPENDIX A

REVISION OF BLOOM'S TAXONOMY

In this model, each of the colored blocks shows an example of a learning objective that generally corresponds with each of the various combinations of the cognitive process and knowledge dimensions.

Model created by: Rex Heer
Iowa State University
Center for Excellence in Learning and Teaching
Updated January, 2012
Licensed under a Creative Commons Attribution-
NonCommercial-ShareAlike 3.0 Unported License
For additional resources, see:
www.celt.iastate.edu/teaching/RevisedBlooms1.html

Source: Created by Rex Heer, Iowa State University, Center for Excellence in Learning and Teaching. March 2009. http://www.celt.iastate.edu/teaching/effective-teaching-practices/revised-blooms-taxonomy.

MAJ de León: MMAS research map   "Army PME should place a greater emphasis on education."

Army documents
➤ Strategy
➤ Concept
➤ Vision
➤ Doctrine

Describe a 3 legged stool of prof. development
➤ Institution
➤ Unit
➤ Individual

Describe vision & requirement for a certain kind of critically thinking, creative, competent, adaptive leader

Tension in the field
➤ Doctrine vs creativity
➤ Standard = success
➤ Mission command
➤ "Your responsibility"

Requires leaders
➤ Studied doctrine (D)
➤ Skilled critical thinkers (CT)
➤ Skilled in judging D vs CT

Situation
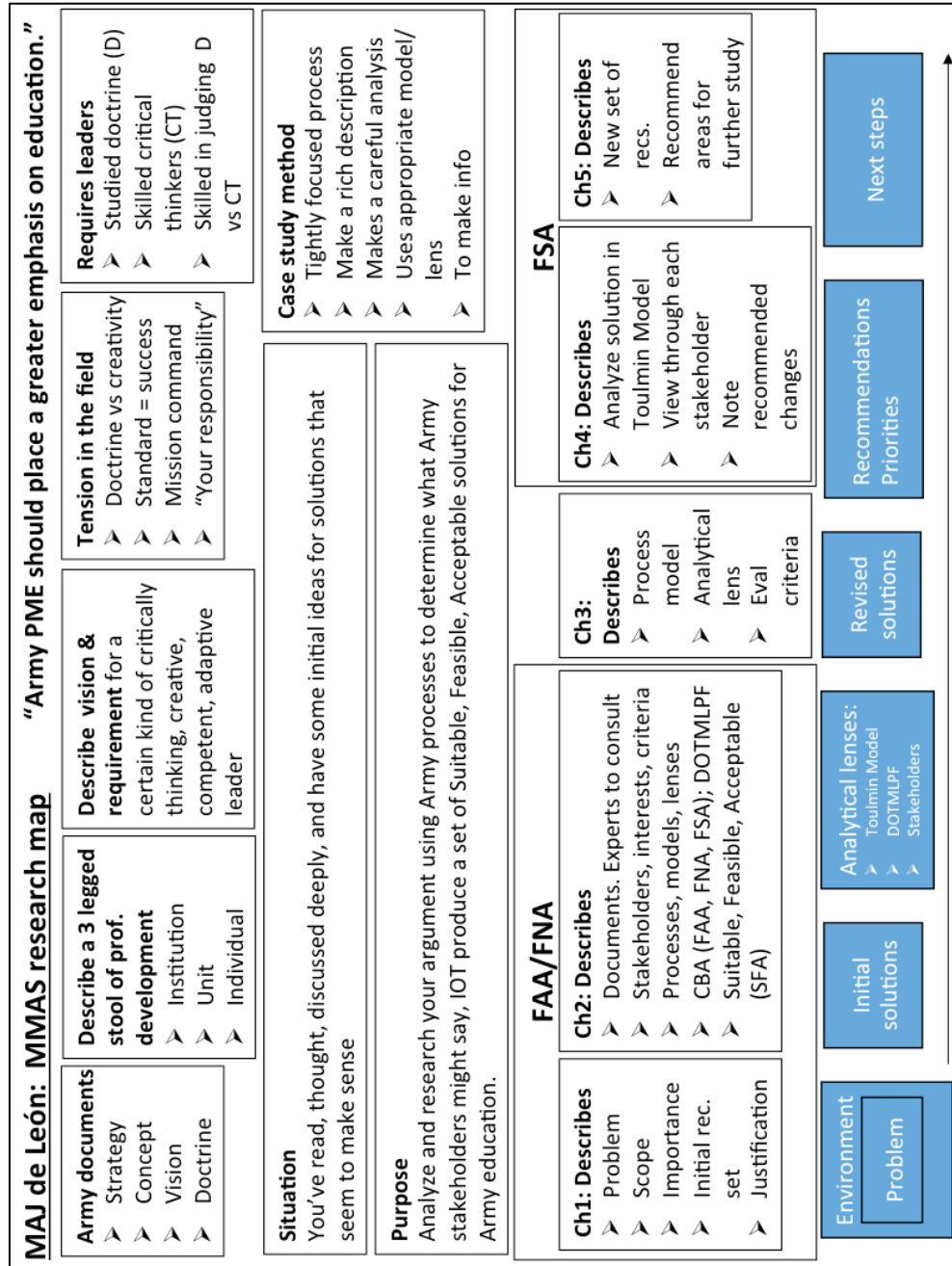You've read, thought, discussed deeply, and have some initial ideas for solutions that seem to make sense

Purpose
Analyze and research your argument using Army processes to determine what Army stakeholders might say, IOT produce a set of Suitable, Feasible, Acceptable solutions for Army education.

Case study method
➤ Tightly focused process
➤ Make a rich description
➤ Makes a careful analysis
➤ Uses appropriate model/lens
➤ To make info

FAA/FNA

Ch1: Describes
➤ Problem
➤ Scope
➤ Importance
➤ Initial rec. set
➤ Justification

Ch2: Describes
➤ Documents. Experts to consult
➤ Stakeholders, interests, criteria
➤ Processes, models, lenses
➤ CBA (FAA, FNA, FSA); DOTMLPF
➤ Suitable, Feasible, Acceptable (SFA)

Ch3: Describes
➤ Process model
➤ Analytical lens
➤ Eval criteria

FSA

Ch4: Describes
➤ Analyze solution in Toulmin Model
➤ View through each stakeholder
➤ Note recommended changes

Ch5: Describes
➤ New set of recs.
➤ Recommend areas for further study

Environment / Problem

Initial solutions

Analytical lenses:
➤ Toulmin Model
➤ DOTMLPF
➤ Stakeholders

Revised solutions

Recommendations Priorities

Next steps

Source: Kenneth E. Long, D.M., Assistant Professor/Force Sustainment and Management, Department of Logistics and Resource Operations, Command and General Staff College. MMAS discussion (jpeg). Received by author via email, 17 April 2016.

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